



Technology Evaluation for Environmental Risk Mitigation Principal Center

Energy and Water Management

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Energy efficiency isn't just a good idea; it's a necessity, both for cost reasons and to meet federal regulatory requirements.

First, rising energy unit costs continue to erode NASA's mission budget. NASA spent roughly \$156M on facility energy in FY 2007. Although that represents less than one per cent of NASA's overall annual budget, the upward trend in energy costs concerns the agency. While NASA reduced consumption 13%, energy unit costs have risen 63%. Energy cost increases counteract the effects of energy conservation, which results in NASA buying less yet spending more.

The second factor is federal energy legislation. The *National Energy Conservation Policy Act*, as amended by the Energy Policy Act of 2005, Executive Order (EO) 13423 (January, 2007), and the *Energy Independence and Security Act* (December, 2007), mandates energy/water conservation goals for all federal agencies, including NASA. There are also reporting requirements associated with this legislation. The Energy/Water Management Task was created to support NASA Headquarters Environmental Management Division (HQ EMD) in meeting these requirements.

With assistance from TEERM, HQ EMD compiled and submitted the *NASA Annual Report to the Department of Energy FY 2007*. The report contains information on how NASA is meeting federally mandated energy and water management goals. TEERM monitored input for timeliness, errors, and conformity to the new energy/water reporting guidelines and helped compile the information into the final report.

TEERM also assists NASA Energy/Water Management with proposal and award calls, updates to the energy/water management database, and facilitating communication within the energy/water management community.

TEERM is also supporting NASA and the Interagency Working Group (IWG) on Hydrogen and Fuel Cells. Established shortly after the President announced the Hydrogen Fuel Initiative in 2003, this IWG serves as the mechanism for collaboration among the Federal agencies involved in hydrogen-related research, development, and demonstration. TEERM developed a matrix showing all Hydrogen and Fuel Cell activities from the various NASA centers to be included in the Group's extensive hydrogen research taxonomy of past, present, and future hydrogen activities of the Federal government.

